SPECFICATION

AMENDMENTS TO THE CLAIMS

1. - 46. (Canceled)

47.   (Previously added)   A method of filtering upstream scheduling messages in a data communication system that includes a headend and at least one subscriber unit, wherein the system has an upstream and a downstream transmission path, the method comprising:

obtaining a scheduling message from the headend, the scheduling message having a plurality of information elements (IE's);

filtering the scheduling message to identify a plurality of IEs that are associated and that correspond to a selected subscriber unit by:

filtering the scheduling message to identify well-known addresses using a software implementation; and

filtering the scheduling message to identify IEs that are associated with the selected subscriber unit by:

writing a service identifier (SID) of a selected IE into a hardware input register;

comparing the hardware input register contents to a hardware look-up table;

storing the resulting comparison value into a hardware result register; and

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determining whether the hardware result register whether the selected IE represents a unicast address that corresponds to the selected subscriber unit; and

storing an information set based upon the plurality of IEs obtained in the step of filtering the scheduled message into a filtered scheduling message.

48. (Currently Amended) A method of filtering upstream scheduling messages in a data communication system that includes a headend and at least one subscriber unit, wherein the system has an upstream and a downstream transmission path, the method comprising:

obtaining a scheduling message from the headend, the scheduling message including a MAP message having a plurality of information elements (IE's), at least one IE including a service identifier (SID), an Interval Usage Code (IUC), a Minislot offset and a Minislot length value;

filtering the MAP message to identify a plurality of IEs that correspond to a selected subscriber unit, and to generate a filtered MAP message having a plurality of data fields, where the MAP message includes at least one Null IE; and

storing an information set based upon the plurality of IEs obtained in the step of filtering the MAP message into a filtered scheduling message that includes the following sub-steps:

(1) before encountering Null IE, storing the information using a first process;

(2) when encountering the Null IE, storing the information using a second process; and

(3) after encountering the Null IE, storing the information using a third process.

49.   (Currently Amended) The method of filtering upstream scheduling messages as set forth in Claim 48 wherein the MAP message further includes at least one Real IE ~~and at least one Null IE~~.

50.   (Currently Amended) The method of filtering upstream scheduling messages as set forth in Claim 48, wherein the MAP message further includes at least one Real IE~~, at least one Null IE~~ and at least one Acknowledgement IE.

51.   (Cancelled)

52.   (Currently Amended) The method of filtering upstream scheduling messages as set forth in Claim [51] 50, wherein the first process comprises Real IE processing.

53.   (Previously added)   The method of filtering upstream scheduling messages as set forth in Claim 52, wherein the Real IE processing process comprises the following sub-steps:

storing the SID in a 16-bit SID field;

storing the IUC in an 8-bit IUC field;

storing the Minislot offset in a 16-bit Minislot offset field;

calculating a Minislot length; and

storing the Minislot length in a 16-bit Minislot length field.

54.   (Previously added)   The method of filtering upstream scheduling messages as set forth in Claim 51, wherein the second process comprises Null IE processing.

55.   (Previously added)   The method of filtering upstream scheduling messages as set forth in Claim 54, wherein Null IE processing comprises the following sub-steps:

storing a value of Zero in a 16-bit SID field;

storing a value of 7 in an 8-bit IUC field;

storing the Minislot offset in a 16-bit Minislot offset field; and

storing a value of zero in a 16-bit Minislot length field.

56.   (Previously added)   The method of filtering upstream scheduling messages as set forth in Claim 51, wherein the third process comprises Acknowledgment IE processing.

57.   (Previously added)   The method of filtering upstream scheduling messages as set forth in Claim 56, wherein Acknowledgement IE processing comprises the following sub-steps:

storing the SID in a 16-bit SID field;

storing the IUC in an 8-bit IUC field;

storing the Minislot offset in a 16-bit Minislot offset field; and

storing a value of zero in a 16-bit Minislot length field.